

**State of Arizona
Department of Education
2008 Educational Technology Standard**

**Approved by Arizona State Board of Education
May 18, 2009**

Educational Technology Standard Articulated by Grade Level

STATE BOARD OF EDUCATION

Jacob Moore	President 2009
Dr. Vicki Balentine	Vice-President 2009
Superintendent Tom Horne	Executive Officer
Dr. John Haeger	University President
Dr. Karen Nicodemus	Community College President
Jesse Ary	Public Member
Larry Lucero	Public Member
Jaime Molera	Public Member
Bonnie Kasey	Classroom Teacher
Anita Mendoza	Charter School Administrator
Cecilia Owen	County School Superintendent

Educational Technology Standard Articulated by Grade Level

Administration

Tom Horne

Superintendent of Public Instruction

Margaret Dugan

Deputy Superintendent of Public Instruction

FACILITATING STAFF MEMBERS

Cathy Poplin

*Deputy Associate Superintendent for Educational
Technology*

Nan Williams

Director of Educational Technology

Brett Hinton

Educational Technology Program Specialist

Lacey Wieser

Science Education Program Specialist

Mark Nagasawa

*Early Childhood Special Education Program
Specialist*

Teresa Wolfe

Administrative Assistant III

Krystal Nesbitt

Administrative Assistant II

Educational Technology Standard Articulated by Grade Level
EDUCATIONAL TECHNOLOGY STANDARD REVISION TEAM

Amy Chayefsky	Amanda Hughens	Jennifer Merrill
Philippe Denette	Chris Johnson	Valerie Naish
Marguerite Dimiceli	Shayne Kenoyer	Helen Padgett
Ximena Doyle	Ed Kowalczyk	Janis Parks
Rosalinda Escandon	Bob Kramer	Terrie Rust
Teresa Foulger	Kimberly LaPrade	Peggy Steffens
Leslie Gates	Rebecca Love	Kim Thomas
Michael Hall	Ann Lumm	Tricia Troiano
Julia Howe	Priscilla Lundberg	

Educational Technology Standard Articulated by Grade Level

STATE REPRESENTATION

Participants who worked on the revision and articulation of the Educational Technology Standard represented the schools, districts, and organizations listed below. The goal was to have representation from large and small districts, urban and rural schools, and geographic and ethnic diversity.

Amphitheater School District	Gilbert Public Schools	Peoria Unified School District
Arizona State University	Grand Canyon University	Tempe Union High School District
Agua Fria Union High School	Litchfield Elementary School District	Tucson Unified School District
Bennett Academy & Venture Academy	Madison School District	University of Arizona
Casa Grande Union High School District	Marana Unified School District	Washington Elementary School District
Cartwright Elementary School District	Maricopa County Educational Services Agency	Yuma Educational Technology Consortium
Friendly House-Academia del Pueblo	Paradise Valley Unified School District	

Educational Technology Standard Articulated by Grade Level

EXTERNAL REVIEWERS/CONSULTANTS

Paula Don, M. Ed., (International Society for Technology in Education -ISTE consultant) is the Director in Educational Technology, in the School District of Philadelphia. In this capacity Paula manages educational technology programs for the District. She serves as the liaison to the State Educational Technology Department. Paula received her BA and MS Ed from the University of Southern California. Paula has been working in education for over 30 years. She began her career with the Los Angeles Unified School District, moving to Philadelphia in 1982. Prior to joining the Educational Technology Group in 1999, Paula was a classroom and computer lab teacher in multiple grade settings. Paula also worked in the corporate sector providing training in data systems and database information access. Paula has worked with ISTE since 2005 serving on a number of committees and consulting on NETS related projects.

Kate Kemker, Ph.D, (Florida Department of Education) is the Director of Technology and Learning Innovation for the Florida Department of Education. Kate is a life-long educator who works to ensure the utilization of technology as a tool that can level the learning field and enrich all students' lives. Kate completed her doctorate at the University of South Florida in the area of Curriculum and Instruction, in which she examined Florida's elementary students' access to technology in high and low socioeconomic schools. She also received her Masters in Education Degree for Instructional Technology and Bachelor's Degree for Music Education from the University of South Florida. She has presented and conducted workshops at various state and national conferences, such as the Florida Educational Technology Conference, the Annual Conference of the Association for Supervision and Curriculum Development, and the National Educational Computing Conference. In addition, she is a member of the ISTE board of educators.

Educational Technology Standard Articulated by Grade Level

INTRODUCTION

In order to ensure that all students have the skills and capacity to solve the complex problems facing society today and in the future, this Educational Technology Standard guides efforts to enhance student learning through the integration of technology and academics. It also provides a framework that supports the learning process.

Organizations such as the Partnership for 21st Century Skills, the American Library Association, and International Society for Technology in Education have identified the skills and habits of the mind that students need to thrive in the new economy and solve the complex problems facing our society. Research in cognitive science is finding that the ability of a learner to demonstrate these skills is enhanced by the use of existing and emerging technologies.

The Educational Technology Standard committee, in revising the technology standards developed in 1998, has recognized this shift from technology being a supplemental topic, taught only in the computer lab, to technology supporting all learning. Keeping this shift in mind, the standard and the accompanying performance objectives have been written with the intention that they be taught within the content standards and they should not be considered as isolated standards to be taught in a vacuum.

"Teachers must become comfortable as co-learners with their students and with colleagues around the world. Today it is less about *staying ahead* and more about *moving ahead* as members

of dynamic learning communities. The digital-age teaching professional must demonstrate a vision of technology infusion and develop the technology skills of others. These are the hallmarks of the new education leader." *Don Knezek, ISTE CEO, 2008*

The need for students to understand and use a variety of digital strategies in multiple contextual situations has never been greater. The use of multiple technologies continues to increase in all aspects of everyday life, in the workplace, in scientific and technical communities. Today's changing world will offer enhanced opportunities and options for those who thoroughly understand and are able to use technology effectively. The Arizona Technology Standard Articulated by Grade Level is intended to facilitate this vision.

RATIONALE

The use of technology is altering the way that teachers are teaching and students are learning. Arizona students must have regular opportunities to use these tools to develop skills that encourage creativity and innovation, communication and collaboration, research and information fluency, critical thinking, problem solving and decision making, digital citizenship, and personal productivity in the classroom and in daily life. Once these skills are obtained, students will be on the road to becoming lifelong learners and contributing members of a global technological society.

Educational Technology Standard Articulated by Grade Level

METHODOLOGY

Work teams representing populations from around the state were formed. These groupings were comprised of large and small schools, rural and urban schools, and were ethnically diverse. The work team members consisted of classroom teachers, curriculum directors, educational technology teacher leaders, Career and Technical Education teachers, second-career teachers, librarians, and university college faculty. The goal was to revise and articulate the Educational Technology Standard K-12.

The Educational Technology revision teams utilized research and guidance from national organizations/resources such as the International Society for Technology Educators (ISTE), International Technology Education Association (ITEA), enGauge - North Central Regional Educational Laboratory, The Partnership for 21st Century Skills, American Association of School Libraries (AASL), the National Forum for Information Literacy, and other states' frameworks were used as guiding documents. Then the committee looked at the current Arizona Educational Technology Standards, adopted in 2000, to determine whether or not the committee should update the standards or consider a total revision. Based upon the research and the changes in educational technology, the committee decided to rewrite the educational technology standards and began articulating and defining by grade level, the concepts and performance objectives for kindergarten through high school.

The revision grade level teams created draft documents with performance objectives articulated to the appropriate grade levels. The draft was available for public comment in the fall of 2008. Stakeholders commented on the draft via email, an online survey and during face-to-face Public Comment Sessions. Once the comment period was closed the teams and smaller sub-committees of teams refined the draft documents based on clarity, cohesiveness, and comprehensiveness. Reasonableness, usefulness, and appropriateness were key guidelines for the articulation process. The measurability of each performance objective was also a consideration.

ORGANIZATION OF THE EDUCATIONAL TECHNOLOGY STANDARD

The Educational Technology Standard Articulated by Grade Level is divided into six main strands:

- Creativity and Innovation
- Communication and Collaboration
- Research and Information Literacy
- Critical Thinking, Problem Solving and Decision Making
- Digital Citizenship
- Technology Operations and Concepts

Each strand is divided into concepts that broadly define the skills and knowledge that students are expected to know and be able to do. Under each concept are performance objectives (POs) that more specifically delineate the ideas to be taught and learned.

Educational Technology Standard Articulated by Grade Level

The comprehensive document (Pre-K-High School) is designed so that teachers can read the performance objectives across grade levels to incorporate learning from previous, current, and future grade levels. The standard is separated into two separate documents. The first document spans grade levels Pre-K through 6, and the second document covers grades 7 through High School. Viewing the Educational Technology Standard document from left to right helps the teacher to see the educational technology continuum across the grade levels. Every effort was made to eliminate repetitions. The intent was to build on the learning in previous grade levels, connect important ideas, and highlight new content each year. This coherency supports students in developing new understandings and skills. Looking down each individual column enables a teacher to see the performance objectives that students are expected to know and be able to do at any grade level.

This organization does not imply that the teaching and learning of the educational technology standard should be fragmented or compartmentalized. Educational technology is a highly interconnected discipline; ideas from all six strands need to be continuously integrated as needed to make meaning and connections to other content areas, concepts and performance objectives. In each grade level document (Resource Guide), these connections are highlighted.

The order of the strands, concepts, and performance objectives (POs) in the Educational Technology Standard document are not intended to be a checklist for instruction. Concepts develop with a spiraling of ideas/skills that are interconnected and dependent on each other, and this is reflected in the standard document. Effective instruction often incorporates several

performance objectives into an integrated experience of learning for the student.

New to the 2009 Educational Technology Standard is the development of more comprehensive grade level documents (Resource Guide). The format of these documents will support the implementation of the revised standard. After each concept statement, there are summary expectations appropriate for that specific grade level. These statements provide a roadmap for instruction. Teachers will notice that there are now three columns of information. The first column lists the performance objectives with accompanying strand/concept and content area connections. The middle column provides explanation for the performance objectives. The third column provides instructional support to teachers in the form of examples.

Strand 1: Creativity and Innovation

This strand requires that students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

Concept 1: Knowledge and Ideas

Use technology to generate knowledge and new ideas.

Concept 2: Models and Simulations

Use digital models and simulations to examine real-world connections, explore complex systems and issues, and enhance understanding.

Concept 3: Trends and Possibilities

Use technology to forecast trends and possibilities.

Educational Technology Standard Articulated by Grade Level

Concept 4: Original Works

Use technology to create original works in innovative ways.

Strand 2: Communication and Collaboration

This strand requires students to use digital media and environments to communicate and collaborate with others.

Concept 1: Effective Communications and Digital Interactions
Communicate and collaborate with others employing a variety of digital environments and media.

Concept 2: Digital Solutions
Contribute to project teams to produce original works or solve problems.

Concept 3: Global Connections
Create cultural understanding and global awareness by interacting with learners of other cultures.

Strand 3: Research and Information Literacy

This strand requires that students apply digital tools to gather, evaluate, and use information.

Concept 1: Planning
Plan strategies to guide inquiry.

Concept 2: Processing
Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.

Strand 4: Critical Thinking, Problem Solving, and Decision Making

This strand requires students to use critical thinking, problem solving, and decision making to manage projects using digital tools and resources.

Concept 1: Investigation
Identify and define authentic problems and significant questions for investigations.

Concept 2: Exploring Solutions
Plan and manage activities to develop solutions to answer a question or complete a project.

Strand 5: Digital Citizenship

This strand requires students to understand human, cultural, and societal issues related to technology practice and ethical behavior.

Concept 1: Safety and Ethics
Advocate and practice safe, legal, and responsible use of information and technology.

Concept 2: Leadership for Digital Citizenship
Demonstrate leadership for digital citizenship.

Concept 3: Impact of Technology
Develop an understanding of cultural, historical, economic and political impact of technology on individuals and society.

Educational Technology Standard Articulated by Grade Level

Strand 6: Technology Operations and Concepts

This strand requires students to demonstrate a sound understanding of technology concepts, systems, and operations.

Concept 1: Understanding

Recognize, define and use technology processes, systems, and applications.

Concept 2: Applications

Select and use applications effectively and productively.

Concept 3: Problem Solving

Define problems and investigate solutions in systems and processes.

Concept 4: Transfer of Knowledge

Transfer current knowledge to learning of new technologies.

Educational Technology Standard Articulated by Grade Level

Strand 1: Creativity and Innovation

Every student should understand and use all concepts and skills from the previous grade levels. The standard is designed so that new learning builds on preceding skills.

Concept 1: Knowledge and Ideas	Use technology to generate knowledge and new ideas.
Concept 2: Models and Simulations	Use digital models and simulations to examine real-world connections, explore complex systems and issues, and enhance understanding.
Concept 3: Trends and Possibilities	Use technology to forecast trends and possibilities.

Strand 2: Communication and Collaboration

Every student should understand and use all concepts and skills from the previous grade levels. The standard is designed so that new learning builds on preceding skills.

Concept 1: Effective Communication Digital Interactions	Communicate and collaborate with others employing a variety of digital environments and media.
Concept 2: Digital Solutions	Contribute to project teams to produce original works or solve problems.
Concept 3: Global Connections	Create cultural understanding and global awareness by interacting with learners of other cultures.

Educational Technology Standard Articulated by Grade Level

Strand 3: Research and Information Literacy

Every student should understand and use all concepts and skills from the previous grade levels. The standard is designed so that new learning builds on preceding skills.

Concept 1: Planning

Plan strategies to guide inquiry.

Concept 2: Processing

Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.

Strand 4: Critical Thinking, Problem Solving and Decision Making

Every student should understand and use all concepts and skills from the previous grade levels. The standard is designed so that new learning builds on preceding skills.

Concept 1: Investigation

Identify and define authentic problems and significant questions for investigations.

Concept 2: Exploring Solutions

Plan and manage activities to develop solutions to answer a question or complete a project.

Educational Technology Standard Articulated by Grade Level

Strand 5: Digital Citizenship

Every student should understand and use all concepts and skills from the previous grade levels. The standard is designed so that new learning builds on preceding skills.

Concept 1: Safety and Ethics	Advocate and practice safe, legal, and responsible use of information and technology.
Concept 2: Leadership for Digital Citizenship	Demonstrate leadership for digital citizenship.
Concept 3: Impact of Technology	Develop an understanding of cultural, historical, economic and political impact of technology on individuals and society.

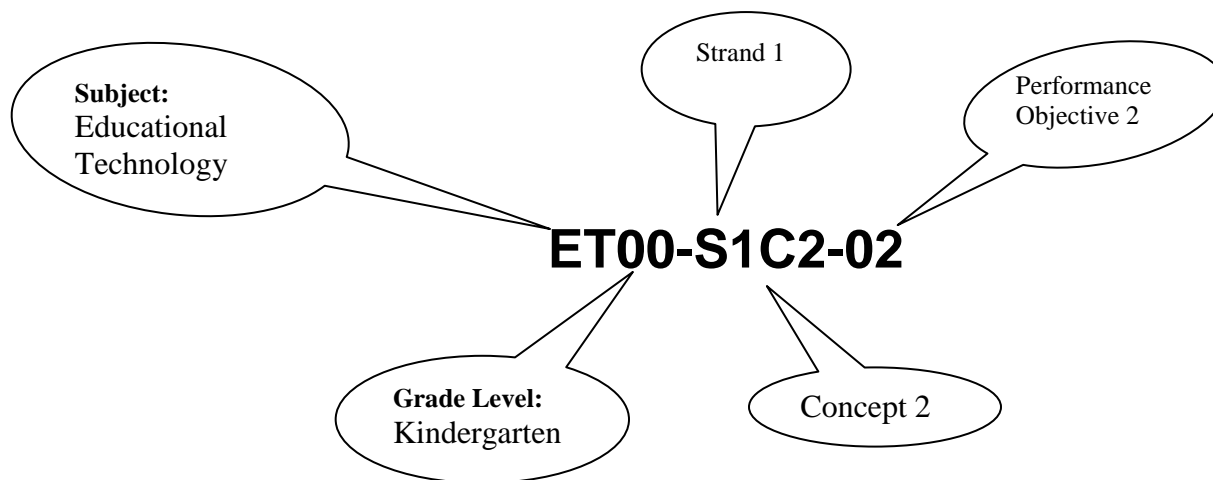
Strand 6: Technology Operations and Concepts

Every student should understand and use all concepts and skills from the previous grade levels. The standard is designed so that new learning builds on preceding skills.

Concept 1: Understanding	Recognize, define, and use technology processes, systems, and applications.
Concept 2: Applications	Select and use applications effectively and productively.
Concept 3: Problem Solving	Define problems and investigate solutions in systems and processes.
Concept 4: Transfer of Knowledge	Transfer current knowledge to learning new technologies.

Educational Technology Standard Articulated by Grade Level

Coding for Articulated Standards



Examples of Educational Technology items:

ET04-S3C1-03 (Grade 4, Strand 3, Concept 1, PO 3)

ETHS-S2C2-01 (High School, Strand 2, Concept 2, PO 1)

Connections are provided in the Educational Technology Standard where appropriate in the grade level documents (Resource Guide). Examples of coding for other subjects are shown below:

Examples of Science items:

SC01-S1C2-02 (Grade 1, Strand 1, Concept 2, PO 2)

SCHS-S5C1-01 (High School, Strand 5, Concept 1, PO 1)

Examples of Social Studies items:

SS01-S1C2-02 (Grade 1, Strand 1, Concept 2, PO 2)

SSHS-S5C1-01 (High School, Strand 5, Concept 1, PO 1)

Educational Technology Standard Articulated by Grade Level

Pre-K to 6th Grade

Educational Technology Standard Articulated by Grade Level

Strand 1: Creativity and Innovation

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 1: Creativity and Innovation

Concept 1: Knowledge and Ideas Use technology to generate knowledge and new ideas.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
		PO 1. Evaluate information to generate ideas.	PO 1. Evaluate information to generate ideas.	PO 1. Evaluate information to generate ideas and processes.	PO 1. Evaluate information to generate ideas and processes.	PO 1. Analyze information to generate ideas and processes.	PO 1. Analyze information to generate new ideas and products.

Concept 2: Models and Simulations Use digital models and simulations to examine real-world connections, explore complex systems and issues, and enhance understanding.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
		PO 1. Identify elements of a digital model or simulation.	PO 1. Identify elements of a digital model or simulation.	PO 1. Recognize and explain relevant interdependent elements of a digital model or simulation.	PO 1. Recognize and explain relevant interdependent elements of a digital model or simulation.	PO 1. Recognize and explain relevant interdependent elements of a digital model or simulation.	PO 1. Recognize and explain relevant interdependent elements of a digital model or simulation.
PO 1. Explore and identify models and simulations.	PO 2. Explore and identify models and simulations.	PO 2. Explore and identify models and simulations.	PO 2. Identify and describe how aspects of a situation change using models or simulations.	PO 2. Identify and describe how aspects of a situation change using models or simulations.	PO 2. Explore and experiment with system variables using models or simulations.	PO 2. Explore and experiment with system variables using models or simulations.	PO 2. Explore and experiment with system variables using models or simulations.
		PO 3. Identify a system.	PO 3. Describe how one system operates by comparing it to another system.	PO 3. Transfer understanding of how one system operates by comparing it to another system.	PO 3. Transfer understanding of how one system operates by comparing it to another system.	PO 3. Compare and contrast two systems using a digital model or simulation.	PO 3. Compare and contrast two systems using a digital model or simulation.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 1: Creativity and Innovation

Concept 3: Trends and Possibilities Use technology to forecast trends and possibilities.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
	PO 1. Observe and extend patterns.	PO 1. Recognize and create patterns.	PO 1. Examine patterns to identify trends.	PO 1. Examine patterns and identify trends to generate questions.	PO 1. Identify patterns and trends to generate questions and draw conclusions.	PO 1. Identify patterns and trends to draw conclusions and forecast possibilities.	PO 1. Identify patterns and trends to draw conclusions and forecast possibilities.

Concept 4: Original Works Use technology to create original works in innovative ways.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Use digital creativity tools to develop ideas and create a project.	PO 1. Use digital creativity tools to develop ideas and create a project.	PO 1. Use digital creativity tools to develop ideas and create a project.	PO 1. Use digital creativity tools to create original works.	PO 1. Use digital creativity tools to create original works.	PO 1. Analyze information using digital creativity tools to create original works and express ideas.	PO 1. Analyze information using digital creativity tools to create original works and express ideas.	PO 1. Analyze information using digital creativity tools to create original works and express ideas.
		PO 2. Use digital collaborative tools to develop collective ideas.	PO 2. Use digital collaborative tools to develop collective ideas.	PO 2. Use digital collaborative tools to analyze information to produce original works.	PO 2. Use digital collaborative tools to analyze information to produce original works and express ideas.	PO 2. Analyze information using digital collaborative tools to produce original works and express ideas.	PO 2. Use digital collaborative tools to analyze information to produce original works and express ideas.

Educational Technology Standard Articulated by Grade Level

Strand 2: Communication and Collaboration

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 2: Communication and Collaboration

Concept 1: Effective Communications and Digital Interactions Communicate and collaborate with others employing a variety of digital environments and media.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Identify different methods of communication.	PO 1. Communicate with others as a whole class using digital tools.	PO 1. Communicate with others as a whole class using digital tools.	PO 1. Communicate with others as a whole class or small group using digital tools.	PO 1. Communicate digitally with others by selecting and using a variety of appropriate communication tools.	PO 1. Communicate digitally with others by selecting and using a variety of appropriate communication tools.	PO 1. Communicate digitally with others by selecting and using a variety of appropriate communication tools.	PO 1. Communicate digitally with others by selecting and using a variety of appropriate communication tools.
		PO 2. Identify and demonstrate safe and appropriate behavior when using digital environments.	PO 2. Identify and demonstrate safe and appropriate behavior when using digital environments to communicate with others.	PO 2. Identify and demonstrate safe and appropriate behavior when using digital environments to communicate with others.	PO 2. Explain safety and etiquette guidelines of digital environments and demonstrate that knowledge while communicating with intended audiences.	PO 2. Explain and demonstrate the safety and etiquette of digital environments to communicate with intended audiences.	PO 2. Explain and demonstrate the safety and etiquette of digital environments to communicate and collaborate with intended audiences.

Concept 2: Digital Solutions Contribute to project teams to produce original works or solve problems.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Identify digital tools.	PO 1. Participate in a classroom learning project using digital collaborative resources.	PO 1. Participate in a classroom learning project using digital collaborative resources.	PO 1. Identify and apply cooperative group rules to effectively collaborate in a classroom digital learning project.	PO 1. Contribute to a cooperative learning project and demonstrate effective group behaviors while using digital collaborative resources.	PO 1. Contribute to a cooperative learning project and demonstrate effective group behaviors while using digital collaborative resources.	PO 1. Contribute to a cooperative learning project and demonstrate effective group behaviors while using digital collaborative resources.	PO 1. Communicate and collaborate for the purpose of producing original works or solving problems.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 2: Communication and Collaboration

Concept 3: Global Connections

Create cultural understanding and global awareness by interacting with learners of other cultures.

Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Explore other cultures through digital resources.	PO 1. Explore other cultures through digital resources.	PO 1. Participate as a class in communication at a distance.	PO 1. Identify challenges and digital strategies as a class to effectively communicate with other cultures.	PO 1. Identify challenges and digital strategies as a class to effectively communicate with other cultures.	PO 1. Identify challenges and digital strategies as a class to effectively communicate with other cultures.	PO 1. Communicate with individuals from different cultures or geographic areas to explore a variety of perspectives.	PO 1. Participate in communication at a distance with others of different cultures or geographic areas to gain different perspectives of topics.

Educational Technology Standard Articulated by Grade Level

Strand 3: Research and Information Literacy

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 3: Research and Information Literacy

Concept 1: Planning Plan strategies to guide inquiry using technology.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
	PO 1. Generate key words for a search from a teacher-posed question or topic.	PO 1. Generate key words and synonyms for a search.	PO 1. Generate key words and synonyms from a posed question for a search.	PO 1. Determine key words for use in information searches.	PO 1. Determine key words for use in information searches.	PO 1. Predict and use key words and phrases that narrow or broaden information searches.	PO 1. Predict and use key words and phrases that narrow or broaden information searches.
PO 1. Explore a variety of information sources.	PO 2. Explore a variety of information sources.	PO 2. Explore information and online sources.	PO 2. Differentiate types of information and online sources.	PO 2. Differentiate types of information and online sources.	PO 2. Predict which information sources will provide the desired data.	PO 2. Predict which information sources will provide the desired data.	PO 2. Predict which information sources will provide the desired data.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 3: Research and Information Literacy

Concept 2: Processing Locate, organize, analyze, evaluate, synthesize and ethically use information from a variety of sources and media.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
	PO 1. Conduct a search using multiple keywords.	PO 1. Conduct a search using multiple keywords.	PO 1. Conduct a search using keywords to narrow or broaden a search.	PO 1. Conduct a search using keywords to narrow or broaden a search.	PO 1. Use multiple search strategies to locate information.	PO 1. Locate and synthesize information to revise search strategies.	PO 1. Locate and synthesize information to revise search strategies.
PO 1. Use preselected sources.	PO 2. Use preselected sources.	PO 2. Use preselected sources.	PO 2. Use primary and secondary sources.	PO 2. Select and use primary and/or secondary sources.	PO 2. Select and use primary and/or secondary sources.	PO 2. Select and use authoritative primary and/or secondary sources.	PO 2. Use authoritative primary and/or secondary sources.
PO 2. Recognize things are real or make-believe.	PO 3. Demonstrate knowledge of real versus make-believe.	PO 3. Differentiate between a fact, untruth, and an opinion.	PO 3. Differentiate between a fact, untruth, and an opinion.	PO 3. Differentiate between facts and opinions and inaccurate information.	PO 3. Differentiate between fact and opinion, bias, and inaccurate information.	PO 3. Evaluate between fact and opinion, bias, inaccurate and misleading information by consulting more than one source.	PO 3. Evaluate information and media through determining facts, opinion, bias, and inaccuracies by consulting multiple sources.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 3: Research and Information Literacy

Concept 2: Processing Locate, organize, analyze, evaluate, synthesize and ethically use information from a variety of sources and media.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
	PO 4. Sort information into major topics.	PO 4. Sort information into major topics.	PO 4. Sort information into major topics and create a list of ideas.	PO 4. Organize information into major topics and create a list of ideas.	PO 4. Use appropriate digital tools to synthesize research information and to develop new ideas.	PO 4. Use appropriate digital tools to synthesize research information and develop new ideas.	PO 4. Use appropriate digital tools to synthesize research information to develop new ideas and/or create new understanding.
PO 3. Identify and follow rules regarding the use of information resources.	PO 5. Identify and follow rules regarding the use of information resources.	PO 5. Identify and follow ethical behaviors when using resources.	PO 5. Identify and follow legal and ethical behaviors during research and cite resources appropriately.	PO 5. Follow copyright laws when using text and media, obtain permission to use the work of others, and cite resources appropriately.	PO 5. Follow copyright laws when using text, images, videos and/or other sources and obtain permission to use the work of others, and cite resources appropriately.	PO 5. Follow copyright laws when using text, images, videos and/or other sources and obtain permission to use the work of others, and cite resources appropriately.	PO 5. Follow copyright laws when using text, images, videos and/or other sources and obtain permission to use the work of others and cite resources appropriately.

Educational Technology Standard Articulated by Grade Level

Strand 4: Critical Thinking, Problem Solving and Decision Making

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 4: Critical Thinking, Problem Solving, Decision Making

Concept 1: Investigation Identify and define authentic problems and significant questions for investigation.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Collaborate to explore an essential question* for investigation.	PO 1. Collaborate as a class to select an essential question* to research using digital resources.	PO 1. Collaborate as a class or small group to select an essential question* to research using digital resources.	PO 1. Identify an authentic issue and collaborate as a class to define an essential question* using digital tools and resources.	PO 1. Identify an authentic issue and collaborate as a class to define an essential question* using digital tools and resources.	PO 1. Identify an authentic issue and collaborate as a class to define an essential question* using digital tools and resources.	PO 1. Write essential questions to investigate a topic or issue using digital tools and resources.	PO 1. Write essential questions to investigate a topic or issue using digital tools and resources.

*Select essential questions which are rich inquiry based questions that provide higher-order challenges and creative problem-solving opportunities. This could focus on a class investigation about a community problem that is identified through various digital resources and planning tools. NEEDS to be in Glossary

Concept 2: Exploring Solutions Plan and manage activities to develop solutions to answer a question or complete a project.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Participate in a learning project using digital planning tools.	PO 1. Participate in a group learning project using digital tools to answer a question.	PO 1. Participate as group to manage a learning project and identify sources.	PO 1. Participate as group to manage a learning project and identify sources.	PO 1. Manage a learning project using digital planning tools to develop solutions.	PO 1. Manage a learning project using digital planning tools to develop solutions.	PO 1. Plan and manage research using credible digital resources to develop solutions to answer a question.	PO 1. Plan and manage research using credible digital resources to develop solutions to answer a question.
PO 2. Discuss data collected on a predefined question to explore solutions or results.	PO 2. Explore solutions or results as a class by discussing data collected.	PO 2. Propose solutions by discussing data collected to answer a question.	PO 2. Propose solutions by discussing data collected to answer a question.	PO 2. Generate alternative solutions using collected resources and data.	PO 2. Generate alternative solutions using collected resources and data.	PO 2. Generate solutions from different perspectives using collected resources and data.	PO 2. Generate solutions from different perspectives using collected resources and data.

Educational Technology Standard Articulated by Grade Level

Strand 5: Digital Citizenship

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 5: Digital Citizenship

Concept 1: Safety and Ethics Advocate and practice safe, legal, and responsible use of information and technology.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Identify use of personal devices and when it is appropriate to use them.	PO 1. Identify use of personal devices and when it is appropriate to use them.	PO 1. Recognize and discuss when it is appropriate to use a personal digital device.	PO 1. Recognize and discuss when it is appropriate to use a personal digital device.	PO 1. Explain when and why it is appropriate to use a personal digital device.	PO 1. Explain when and why it is appropriate to use a personal digital device.	PO 1. Explain the consequences of inappropriate use of a personal digital device.	PO 1. Assess situations in which it is appropriate and safe to use a personal digital device in the home, school, and community.
		PO 2. Define cyber-bullying.	PO 2. Identify cyber-bullying and discuss the effects of bullying on an individual.	PO 2. Describe cyber-bullying and describe strategies to deal with such a situation.	PO 2. Describe cyber-bullying and describe strategies to deal with such a situation.	PO 2. Describe cyber-bullying and describe strategies to deal with such a situation.	PO 2. Describe cyber-bullying and describe strategies to deal with such a situation.
PO 2. Identify and articulate rules for the use of digital tools.	PO 2. Identify and articulate rules for the use of digital tools as defined by school board policy and procedures.	PO 3. Identify and articulate rules for the use of digital tools as defined by school board policy and procedures.	PO 3. Identify and articulate rules for the use of digital tools as defined by school board policy and procedures.	PO 3. Identify and articulate rules for the use of digital tools as defined by school board policy and procedures.	PO 3. Identify and articulate rules for the use of digital tools as defined by school board policy and procedures.	PO 3. Identify and articulate rules for the use of digital tools as defined by school board policy and procedures.	PO 3. Identify and articulate rules for the use of digital tools as defined by school board policy and procedures.
	PO 3. Discuss why it may be dangerous to visit certain Internet sites.	PO 4. Discuss why it may be dangerous to visit certain Internet sites.	PO 4. Identify and discuss ways to stay safe on the Internet.	PO 4. Identify and discuss why it is important not to provide personal information in online communication.	PO 4. Recognize and describe the potential risks and dangers associated with various forms of online communications.	PO 4. Recognize and describe the potential risks and dangers associated with various forms of online communications.	PO 4. Identify and articulate strategies to protect personal information.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 5: Digital Citizenship

Concept 1: Safety and Ethics Advocate and practice safe, legal, and responsible use of information and technology.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
					PO 5. Recognize and describe the advantages and risks of making a personal spending choice online.	PO 5. Recognize and describe the potential advantages and risks of making an online purchase.	PO 5. Evaluate various websites to choose the best option for making an Internet purchase for a particular product.
PO 3. Recognize and discuss why there are rules for using technology at home and at school.	PO 4. Recognize and discuss why there are rules for using technology at home and at school.	PO 5. Recognize, discuss, and demonstrate appropriate behavior for technology use and show respect for technology equipment.	PO 5. Discuss and demonstrate appropriate behavior for technology use and show respect for technology equipment.	PO 5. Explain the importance of respecting the privacy of others' information and digital workspace.	PO 6. Articulate how to respect the privacy of others' information and digital workspace.	PO 6. Exhibit legal and ethical behavior when using technology and discuss the consequences of misuse.	PO 6. Exhibit legal and ethical behavior when using technology and discuss consequences of misuse.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 5: Digital Citizenship

Concept 2: Leadership for Digital Citizenship Demonstrate leadership for digital citizenship.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
						PO 1. Exhibit digital citizenship by consistently leading by example and advocating social and civic responsibility to others.	PO 1. Promote digital citizenship by consistently leading by example and advocating social and civic responsibility to others.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 5: Digital Citizenship

Concept 3: Impact of Technology

Develop an understanding of the cultural, historical, economic and political impact of technology on individuals and society.

Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Recognize and discuss examples of technology used in daily life.	PO 1. Recognize and discuss examples of technology used in daily life.	PO 1. Recognize and discuss how students and families use technology to make their lives better.	PO 1. Recognize, discuss, and explain different types of technologies used in current and past cultures.	PO 1. Compare how past and present cultures used technology to improve their lives.	PO 1. Provide examples of technologies that might be used to solve a specific economic, environmental, health, political, scientific, or social problem.	PO 1. Explain the impact of technology on individuals and society from a historical, economic, environmental and political perspective.	PO 1. Research a current technology and describe its potential use to solve an economic, environmental, health, political, scientific, or social problem.

Educational Technology Standard Articulated by Grade Level

Strand 6: Technology Operations and Concepts

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 6: Technology Operations and Concepts

Concept 1: Understanding Recognize, define and use technology term, processes, systems and applications.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Identify basic technology terms.	PO 1. Identify basic technology terms.	PO 1. Define basic technology terms.	PO 1. Classify basic technology terms.	PO 1. Define and label various technical system terms.	PO 1. Describe the various technical system terms.	PO 1. Describe the various technical system terms.	PO 1. Define and correctly use terms related to networks.
PO 2. Identify technology process terminology.	PO 2. Identify technology process terminology.	PO 2. Identify and define technology process terminology.	PO 2. Apply knowledge of technology process terminology.	PO 2. Define and apply knowledge of various technical process terms.	PO 2. Define and apply knowledge of various technical process terms.	PO 2. Define and apply knowledge of various technical process terms.	PO 2. Define and apply knowledge of various technical process terms.
PO 3. Identify technology applications for a given activity or project.	PO 3. Identify technology application for a given activity/project.	PO 3. Identify technology applications for a given activity/project.	PO 3. Identify and choose technology applications for a given activity/project.	PO 3. Choose technology applications for a given activity/project.	PO 3. Choose technology applications for a given activity/project.	PO 3. Choose technology applications for a given activity/project.	PO 3. Choose technology applications appropriate for the audience and task.
PO 4. Demonstrate knowledge of electrical safety when using computers and other technology.	PO 4. Demonstrate knowledge of electrical safety when using computers and other technology.	PO 4. Demonstrate knowledge of ergonomics and electrical safety when using computers.	PO 4. Demonstrate knowledge of ergonomics and electrical safety when using computers.	PO 4. Demonstrate knowledge of ergonomics and electrical safety when using computers.	PO 4. Demonstrate knowledge of ergonomics and electrical safety when using computers.	PO 4. Recognize and demonstrate ergonomically safe and sound use of equipment.	PO 4. Recognize and demonstrate ergonomically safe and sound use of equipment.
				PO 5. Identify physical risks of using digital technology.	PO 5. Identify physical risks of using digital technology.	PO 5. Identify physical risks of using digital technology.	PO 5. Identify physical risks of using digital technology.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 6: Technology Operations and Concepts

Concept 2: Application Select and use applications effectively and productively.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Use the mouse/track pad to perform computer functions such as accessing an application, indicating a choice or activating a link. Use the keyboard to type letters and numbers and know how to use special key functions.	PO 1. Use the mouse/track pad to perform computer functions such as accessing an application, indicating a choice or activating a link. Use the keyboard to type letters and numbers and know how to use special key functions.	PO 1. Understand keyboarding techniques when using the keyboard to type letters, numbers and special key functions.	PO 1. Understand keyboarding techniques when using the keyboard to type letters, numbers and special key functions.	PO 1. Demonstrate speed and accuracy in use of keyboard and data entry tools with at least 5 wpm and 80% accuracy.	PO 1. Demonstrate speed and accuracy in use of keyboard and data entry tools with at least 10 wpm and 80% accuracy.	PO 1. Demonstrate speed and accuracy in use of keyboard and data entry tools with at least 15 wpm and 80% accuracy.	PO 1. Demonstrate speed and accuracy in use of keyboard and data entry tools with at least 20 wpm and 80% accuracy.
PO 2. Use technology to identify letters and numbers and differentiate between them.	PO 2. Use technology to identify letters and numbers and differentiate between them.	PO 2. Compose a document that applies basic formatting.	PO 2. Compose a document that applies basic formatting.	PO 2. Compose a document that applies intermediate formatting.	PO 2. Compose a document that applies intermediate formatting.	PO 2. Compose a document that applies intermediate formatting.	PO 2. Compose a document that applies intermediate formatting.
			PO 3. Identify and explain terms and concepts related to spreadsheets while using program to complete a given task.	PO 3. Use spreadsheets to organize and sort data.	PO 3. Use a spreadsheet to record, organize, and graph information.	PO 3. Apply spreadsheet formatting skills.	PO 3. Produce simple charts and graphs from data in a spreadsheet.
			PO 4. Explain that computers can store and organize information so that it can be searched.	PO 4. Define the term “database” and provide examples from everyday life.	PO 4. Perform simple searches of existing databases.	PO 4. Perform searches of existing databases.	PO 4. Perform simple operations in a database.

Educational Technology Standard Articulated by Grade Level
Educational Technology Standard Articulated by Grade Level
Strand 6: Technology Operations and Concepts

Concept 2: Application Select and use applications effectively and productively.							
Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
	PO 3. Use an interactive presentation system as part of classroom work.	PO 3. Use multimedia presentation programs to create simple class assignments.	PO 5. Create and edit multimedia presentation using painting/drawing applications.	PO 5. Plan, create, and edit multimedia presentation.	PO 5. Create multimedia presentations with multiple pages, audio, and transitions for individual assignments.	PO 5. Create multimedia presentations with multiple pages, audio, and transitions for individual assignments.	PO 5. Create multimedia presentations with multiple pages, audio, images, and transitions for individual assignments.
PO 3. Identify and use common navigational elements of a web page.	PO 4. Identify and use common navigational elements of a web page.	PO 4. Identify and use common navigational elements of a web page.	PO 6. Identify components and modules on a web page.	PO 6. Identify components and modules on a web page.	PO 6. Download, store, and accurately cite web resources.	PO 6. Use interactive web content to access, read, send, and receive information.	PO 6. Create a simple web page incorporating text, links, and graphics.
	PO 5. Demonstrate appropriate use of log-in procedures.	PO 5. Demonstrate appropriate use of log-in procedures.	PO 7. Demonstrate appropriate use of log-in procedures and network printing.	PO 7. Demonstrate appropriate use of log-in procedures and network printing.	PO 7. Explain the uses of and the means by which computers are networked.	PO 7. Use network storage drives to access information from a directory.	PO 7. Use network storage drives to access and share information from a directory.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 6: Technology Operations and Concepts

Concept 3: Troubleshoot Systems and Processes

Define problems and investigates solutions in systems and processes.

Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Understand that there are different types of problems with technology.	PO 1. Devise a class plan on how to solve different types of technology problems.	PO 1. Understand that there are different types of problems with technology and identify the type of problem and the steps needed to solve.	PO 1. Identify and apply successful troubleshooting strategies for minor hardware and software issues/problems.	PO 1. Identify and apply successful troubleshooting strategies for minor hardware and software issues/problems.	PO 1. Use the help function within software and hardware to troubleshoot issues and problems.	PO 1. Use the help function within software and hardware to troubleshoot issues and problems.	PO 1. Use the help function within software and hardware to troubleshoot issues and problems.

Concept 4: Transfer of Knowledge

Transfer current knowledge to learning of new technologies.

Pre-K	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
PO 1. Demonstrate knowledge of technology used at home.	PO 1. Transfer knowledge of technology used at home to technology that will be used at school.	PO 1. Transfer understanding of current symbols and icons to learning new technologies.	PO 1. Transfer understanding of current symbols and icons to learning new technologies.	PO 1. Transfer understanding of current input/output devices and symbols and icons to learning new technologies.	PO 1. Transfer understanding of current input/output devices and symbols and icons to learning new technologies.	PO 1. Transfer understanding of current input/output devices, symbols and icons, and applications to learning new technologies.	PO 1. Transfer understanding of current input/output devices, symbols and icons, and applications to learning new technologies.

Educational Technology Standard Articulated by Grade Level

7th Grade to High School

Educational Technology Standard Articulated by Grade Level

Strand 1: Creativity and Innovation

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 1: Creativity and Innovation

Concept 1: Knowledge and Ideas Use technology to generate knowledge and new ideas.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Analyze and evaluate information to generate new ideas, processes or products.	PO 1. Analyze and evaluate information to generate new ideas, processes or products.	PO 1. Analyze, evaluate, and synthesize information to generate new ideas, processes, or products.

Concept 2: Models and Simulations Use digital models and simulations to examine real-world connections, explore complex systems and issues, and enhance understanding.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Summarize the relationship amongst interdependent elements of a digital model or simulation.	PO 1. Summarize the relationship amongst interdependent elements of a digital model or simulation.	PO 1. Predict and test the relationships amongst interdependent elements of a digital model, simulation or system.
PO 2. Analyze system processes and outcomes using models or simulations.	PO 2. Analyze system processes and outcomes using models or simulations.	PO 2. Propose or create a model, simulation, or system.
PO 3. Analyze and apply understanding of how one system, digital models, or simulations operates by comparing it to another system of a different type that operates in a similar manner.	PO 3. Analyze and apply understanding of how one system, digital models or simulations operates by comparing it to another system of a different type that operates in a similar manner.	PO 3. Predict how one system operates by comparing it to multiple systems, digital models or simulations.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 1: Creativity and Innovation

Concept 3: Trends and Possibilities Use technology to forecast trends and possibilities.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Identify patterns and trends to forecast possibilities from different perspectives.	PO 1. Identify patterns and trends to forecast possibilities from different perspectives.	PO 1. Analyze patterns and trends and their logical links to form inferences, and forecast possibilities providing novel insights.
PO 2. Ask questions and investigate a problem from different perspectives and formulate inferences from known facts.	PO 2. Ask questions and investigate a problem from different perspectives and formulate inferences from known facts.	
	PO 3. Draw conclusions that reflect clear and logical links between the trends and patterns and the interpretations made from them.	

Concept 4: Original Works Use technology to create original works in innovative ways.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Create innovative products or projects using digital tools to express original ideas.	PO 1. Create innovative products or projects using digital tools to express original ideas.	PO 1. Create innovative products or projects using digital tools to express original ideas.
PO 2. Use digital collaborative tools to synthesize information, produce original works, and express ideas.	PO 2. Use digital tools to collaborate with a group to communicate original ideas, products, or projects effectively in a creative or innovative style.	PO 2. Use digital collaborative tools to synthesize information, produce original works, and express ideas.

Educational Technology Standard Articulated by Grade Level

Strand 2: Communication and Collaboration

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 2: Communication and Collaboration

Concept 1: Effective Communications and Digital Interactions Communicate and collaborate with others employing a variety of digital environments and media.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Collaborate and communicate with peers, experts, or others employing a variety of digital tools to share findings and/or publish.	PO 1. Collaborate and communicate with peers, experts, or others employing a variety of digital tools to share findings and/or publish.	PO 1. Collaborate with peers, experts, or others in the global community employing a variety of digital tools to share findings and/or publish in a variety of ways.
PO 2. Explain and demonstrate features, conventions, voice, and etiquette of interactive digital environments to communicate with an appropriate audience.	PO 2. Explain and demonstrate features, conventions, voice, and etiquette of interactive digital environments to communicate with an appropriate audience.	PO 2. Communicate information and ideas respectfully and effectively to multiple audiences using a variety of digital environments.

Concept 2: Digital Solutions Contribute to project teams to produce original works or solve problems.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Communicate and collaborate for the purpose of producing original works or solving problems.	PO 1. Communicate and collaborate for the purpose of producing original works or solving problems.	PO 1. Communicate and collaborate for the purpose of producing original works or solving problems.

Concept 3: Global Connections Create cultural understanding and global awareness by interacting with learners of other cultures.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Independently locate and interact with teacher approved global communities.	PO 1. Independently locate and interact with teacher approved global communities.	PO 1. Engage in a global community to contribute to a specific global issue.

Educational Technology Standard Articulated by Grade Level

Strand 3: Research and Information Literacy

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 3: Research and Information Literacy

Concept 1: Planning Plan strategies to guide inquiry.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Predict the most effective keywords and phrases for use in information searches.	PO 1. Predict the most effective keywords and phrases for use in information searches.	PO 1. Identify and defend effective key words, phrases, and strategies for conducting information searches.
PO 2. Determine which information source will provide the desired data.	PO 2. Determine which information source will provide the desired data.	PO 2. Evaluate diverse information sources.

Concept 2: Processing Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Locate and synthesize information utilizing advanced search strategies.	PO 1. Locate and synthesize information utilizing advanced search strategies.	PO 1. Locate and synthesize information utilizing advanced search strategies including a variety of search engines, metadata search engines, deep web searches and databases.
PO 2. Use authoritative primary and/or secondary sources.	PO 2. Evaluate and use authoritative primary and/or secondary sources.	PO 2. Defend the authority of primary and/or secondary sources used in research.
PO 3. Evaluate between fact and opinion, bias, inaccurate and misleading information by consulting multiple sources.	PO 3. Evaluate between fact and opinion, bias, inaccurate and misleading information by consulting multiple sources.	PO 3. Evaluate information identifying facts, opinions, bias, inaccurate and misleading information by analyzing multiple sources.
PO 4. Synthesize research information to create new understanding or develop new ideas.	PO 4. Synthesize research information to create new understanding.	PO 4. Synthesize research information to create new understanding and innovative solutions.
PO 5. Apply ethical use of information and media by respecting copyrights, intellectual property rights, using information and media technology responsibly, and citing resources appropriately.	PO 5. Apply ethical use of information and media by respecting copyrights, intellectual property rights, using information and media responsibly, and citing resources appropriately.	PO 5. Apply ethical use of information and media by respecting the principles of copyrights, intellectual freedom and property rights, using information and media technology responsibly, and citing resources appropriately.

Educational Technology Standard Articulated by Grade Level

Strand 4: Critical Thinking, Problem Solving and Decision Making

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 4: Critical Thinking, Problem Solving, Decision Making

Concept 1: Investigation Identify and define authentic problems and significant questions for investigations.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Write essential questions to investigate a topic or issue using digital tools and resources.	PO 1. Write essential questions to investigate a topic or issue using digital tools and resources.	PO 1. Write essential questions to investigate a complex (multi-step) issue using digital tools and resources.

Concept 2: Exploring Solutions Plan and manage activities to develop solutions to answer a question or complete a project.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Plan, conduct and manage research using appropriate digital resources to develop solutions for a question.	PO 1. Plan, conduct and manage research using appropriate digital resources to develop solutions for a question.	PO 1. Plan and manage an individual learning project that collects multiple data sets from diverse sources, creating planning adjustments and course corrections from the knowledge gained.
PO 2. Present defensible solutions and make decisions from multiple perspectives using collected resources and data.	PO 2. Present defensible solutions and make decisions from multiple perspectives using collected resources and data.	PO 2. Present defensible solutions and make decisions from multiple perspectives using collected resources and data.

Educational Technology Standard Articulated by Grade Level

Strand 5: Digital Citizenship

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 5: Digital Citizenship

Concept 1: Safety and Ethics Advocate and practice safe, legal, and responsible use of information and technology.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Assess situations in which it is appropriate and safe to use a personal digital device in the home, school, community, and in the work place.	PO 1. Assess situations in which it is appropriate and safe to use a personal digital device in the home, school, community, and in the work place.	PO 1. Determine when it is appropriate and safe to use various personal digital devices.
PO 2. Describe strategies to deal with cyber-bullying situations.	PO 2. Describe strategies to deal with cyber-bullying situations.	PO 2. Describe strategies to deal with cyber-bullying situations.
PO 3. Articulate and practice the school and district rules governing the use of digital tools as defined by school board policy and procedures.	PO 3. Articulate and practice the school and district rules governing the use of digital tools as defined by school board policy and procedures.	PO 3. Advocate and practice safe, legal, and responsible use of digital tools as defined by school board policy and procedures.
PO 4. Demonstrate safe online communication practices regarding personal information.	PO 4. Demonstrate safe online communication practices regarding personal information.	PO 4. Demonstrate safe online communication practices regarding personal information.
PO 5. Analyze and compare various aspects of e-commerce.	PO 5. Analyze and compare various aspects of e-commerce.	PO 5. Analyze and compare how web advertising influences consumer choices.
PO 6. Exhibit legal and ethical behavior when using technology.	PO 6. Exhibit legal and ethical behavior when using technology.	PO 6. Advocate and exhibit legal and ethical behavior when using technology.

Concept 2: Leadership for Digital Citizenship Demonstrates leadership for digital citizenship.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Promote digital citizenship by consistently leading by example and advocating social and civic responsibility to others.	PO 1. Promote digital citizenship by consistently leading by example and advocating social and civic responsibility to others.	PO 1. Exhibit digital citizenship by consistently leading by example and advocating social and civic responsibility to others.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 5: Digital Citizenship

Concept 3: Impact of Technology

Develop an understanding of cultural, historical, economic and political impact of technology on individuals and society.

Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Analyze the potential benefits and hazards of a new technology and the possible short- and long-term consequences of implementing this technology.	PO 1. Analyze current economic, environmental, health, political, scientific, or social problems that have technological solutions and propose potential solutions for the problems.	PO 1. Develop a possible technological solution for a contemporary issue.

Educational Technology Standard Articulated by Grade Level

Strand 6: Technology Operations and Concepts

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 6: Technology Operations and Concepts

Concept 1: Understanding Recognize, define and use technology processes, systems, and applications.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Explain and correctly use terms related to networks and connectivity.	PO 1. Explain how systems are integrated detailing input, output, and network devices.	PO 1. Describe how the components of a system are integrated using appropriate terminology.
PO 2. Define and apply knowledge of various technical process terms.	PO 2. Define and apply knowledge of various technical process terms.	PO 2. Define and apply knowledge of various technical process terms.
PO 3. Choose technology applications appropriate for the audience and task.	PO 3. Choose technology applications appropriate for the audience and task.	PO 3. Choose technology applications appropriate for the audience and task.
PO 4. Recognize and demonstrate ergonomically safe and sound use of equipment.	PO 4. Recognize and demonstrate ergonomically safe and sound use of equipment.	PO 4. Recognize and demonstrate ergonomically safe and sound use of equipment.
PO 5. Identify physical risks of using digital technology.	PO 5. Analyze and evaluate physical risks of using digital technology.	PO 5. Investigate and evaluate physical risks of using digital technology.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 6: Technology Operations and Concepts

Concept 2: Applications Select and use applications effectively and productively.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Demonstrate speed and accuracy with appropriate data entry tools with at least 25 wpm and 80% accuracy.	PO 1. Demonstrate speed and accuracy with appropriate data entry tools with at least 30 wpm and 80% accuracy.	PO 1. Demonstrate speed and accuracy using appropriate data entry tools.
PO 2. Compose a document that applies advanced formatting.	PO 2. Compose a multiple section document using advanced formatting.	PO 2. Compose a multiple section document that applies the most appropriate media and advanced formatting.
PO 3. Enter/edit data using simple formulas while using spreadsheet(s) to perform calculations.	PO 3. Apply formatting features while using spreadsheet programs to customize tables, charts, and graphs.	PO 3. Use spreadsheets to calculate, graph, organize, and present data in a variety of real-world settings.
PO 4. Define terms used in database creation and perform simple operations.	PO 4. Create a simple database for a content area.	PO 4. Use database features to export, organize, compile, and output data.
PO 5. Create and edit visual and audio material to generate a multimedia product.	PO 5. Create and edit visual and audio material to generate a stand-alone multimedia product.	PO 5. Compose media for the web with interactive capabilities.
PO 6. Identify criteria for evaluating technical and design qualities of a web site and then create web-based content from the identified criteria.	PO 6. Identify criteria for evaluating technical and design qualities of a web site and then create web-based content from the identified criteria.	PO 6. Create, evaluate and critique web structure and content.
PO 7. Identify and use network protocols for moving files and secure web access.	PO 7. Identify and use network protocols for moving files and secure web access.	PO 7. Use network protocols for moving files and secure web access.

Educational Technology Standard Articulated by Grade Level

Educational Technology Standard Articulated by Grade Level

Strand 6: Technology Operations and Concepts

Concept 3: Problem Solving Define problems and investigate solutions in systems and processes.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Generate and apply solutions to troubleshoot hardware and software issues and problems.	PO 1. Generate and apply solutions to troubleshoot hardware and software issues and problems.	PO 1. Identify and use online help and other support to learn about features of hardware, software, and connectivity as well as to assess and resolve problems.

Concept 4: Transfer of Knowledge Transfer current knowledge to learning of new technologies.		
Grade 7	Grade 8	High School (Grades 9-12)
PO 1. Transfer understanding of current technologies, input/output devices, symbols and icons, and applications to learning new technologies.	PO 1. Transfer understanding of current technologies to new and novel learning situations.	PO 1. Transfer understanding of current technologies to new and novel learning situations.